UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,617	07/11/2006	Katsunori Mineno	2006_1046A	7764

513 7590 05/11/2009

WENDEROTH, LIND & PONACK, L.L.P.
1030 15th Street, N.W.,
Suite 400 East
Washington, DC 20005-1503

EXAMINER	
LIU, HENRY Y	

ART UNIT	PAPER NUMBER
3657	

MAIL DATE	DELIVERY MODE
05/11/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/585,617	MINENO ET AL.	
	Examiner	Art Unit	
	HENRY LIU	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11/19/2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, and 3 are rejected under 35 U.S.C. 103(a) as being anticipated by SIRVEN (4,749,068) in view of CHAN (2002/0171223) and WYMAN (3,062,331).

Regarding Claim 1, SIRVEN teaches “an auto-tensioner for engine accessories” a motorcycle shock absorber. The reference anticipates the current application because it is contains all the structural components and is capable of performing the same functions of the claimed auto tensioner disclosed in the current application (MPEP 2114). SIRVEN teaches “a cylinder (8) (Fig. 1) having an open top end, a sleeve (2) (7) (Fig. 1) having a bottom and inserted in said cylinder (8).” The combination of parts (2) and (7) correspond to the “sleeve.” SIRVEN teaches “a seal member (5) (5a) mounted to said cylinder at said open top end to prevent leakage of hydraulic oil in said cylinder, a rod (3) slidably extending through said seal member (5) (5a), a plunger (1) connected to a

bottom end of said rod (3) so as to be slidable in said sleeve, said plunger (1) defining a reservoir chamber (2b) and a pressure chamber (2a) in said cylinder over and under said plunger (1), respectively, and having a passage (26) through which said pressure chamber (2a) communicates with said reservoir chamber (2b), a check valve (27) provided at said passage (26) to close said passage (26) when a pressure in said pressure chamber (2a) exceeds a pressure in said reservoir chamber (2b)."

SIRVEN does not teach “a return spring mounted around said cylinder to bias said rod outwardly of said cylinder.”

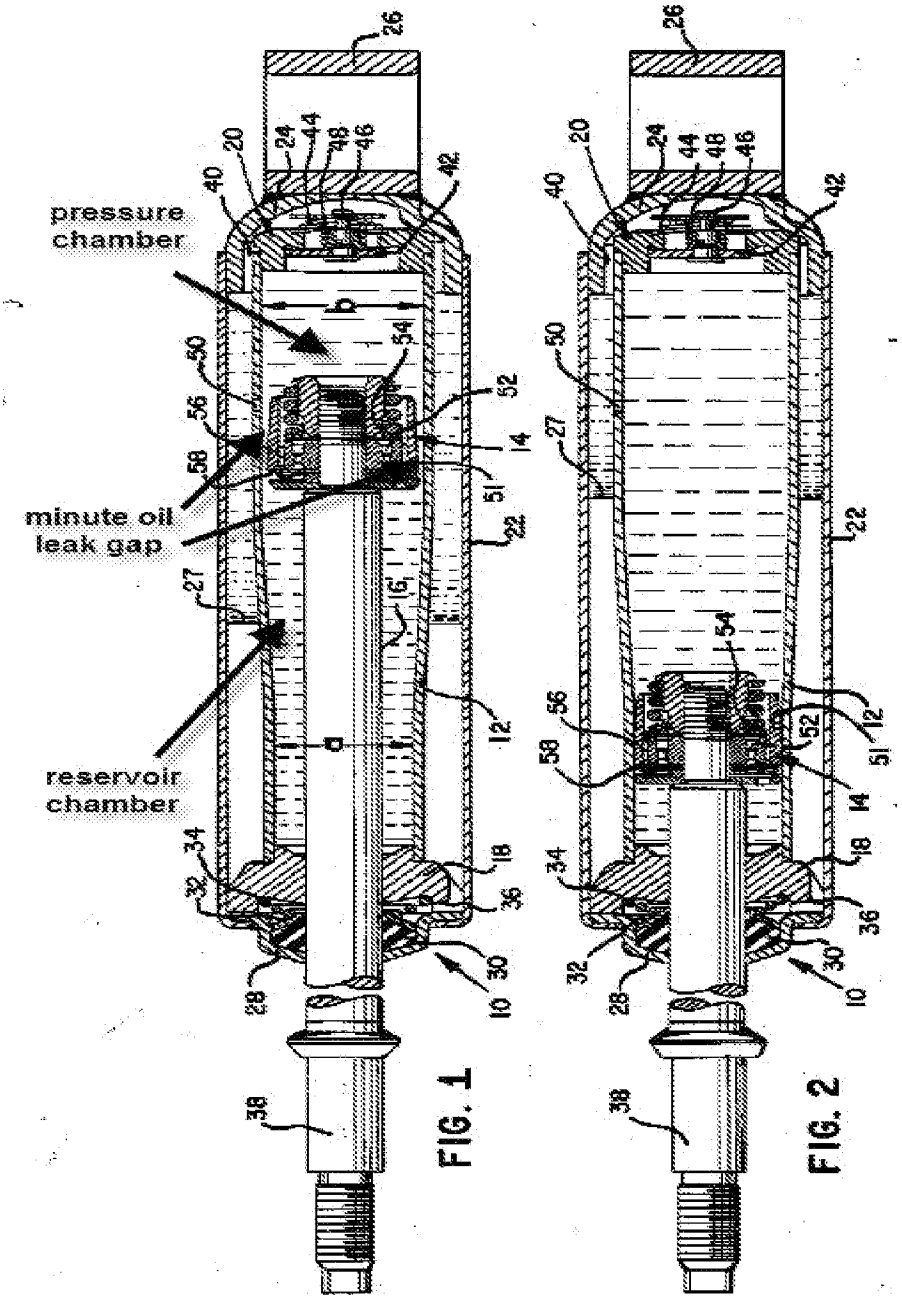
CHAN teaches a spring (40) around the shock absorber (Fig. 1, Fig. 2, Fig. 3, Fig. 4).

It is obvious to one of ordinary skill in the art at the time the invention was made to combine the shock absorber in SIRVEN with the spring in CHAN because it is well known in the art that shock absorbers for an automotive suspension use springs on the outside of the outer tube. The combination allows the shock absorber to be re-extended once it is compressed due to compression which happens

SIRVEN does not teach “wherein a minute oil leak gap is formed between sliding surfaces of said sleeve and said plunger such that hydraulic oil can flow from said pressure chamber into said reservoir chamber via said minute oil leak gap”

WYMAN teaches a minute oil leak gap formed between sliding surfaces of the sleeve (12) and the plunger (14) such that the hydraulic oil can flow from said

pressure chamber into said reservoir chamber via said minute oil leak gap. See figure below.



It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the shock absorber in SIRVEN with the oil leak gap between the plunger and the sleeve in WYMAN to reduce damping for a

desired application while eliminating friction caused by the sliding contact between the plunger and the sleeve.

SIRVEN teaches "a return chamber (49) is defined under said sleeve (2) (7) so as to communicate with said reservoir chamber (2b), said bottom of said sleeve (2) (7) being formed with a valve hole (51) through which said return chamber (49) communicates with said pressure chamber (2a) and wherein a relief valve (41) provided at said valve hole (51) to open said valve hole (51) if the pressure in said pressure chamber (2a) exceeds a set pressure (Col. 7 lines 1-35)." The valve (41) opens due to increased hydraulic fluid pressure in the first chamber (2a) which arises at faster compressive movements.

Regarding Claim 2, SIRVEN as modified teaches "wherein said return chamber (SIRVEN (49)) communicates with said reservoir chamber (SIRVEN (2b)) through at least one axial groove (SIRVEN (33)) formed in a surface between said sleeve (SIRVEN (2) (7)) and said cylinder (SIRVEN (8))."

Regarding Claim 3, SIRVEN as modified does not teach "wherein the surface in which said at least one axial groove (SIRVEN (33)) is formed is an outer peripheral surface of said sleeve (SIRVEN (2) (7) (Fig. 1-3))."

Claims 1, 2, and 3 are rejected under 35 U.S.C. 103(a) as being anticipated by TANAKA (2004/0087398) in view of (JP 5-10849) and TANAKA2 (JP 2000-266144).

Regarding Claim 1, TANAKA teaches “an auto-tensioner (10) for engine accessories comprising a cylinder (20) (Fig. 1) having an open top end, a sleeve (11) (Fig. 1) having a bottom and inserted in said cylinder (20).” TANAKA teaches “a seal member (23) mounted to said cylinder (20) at said open top end to prevent leakage of hydraulic oil in said cylinder (20), a rod (12) slidably extending through said seal member (23), a plunger (13) connected to a bottom end of said rod (12) so as to be slidable in said sleeve (11), said plunger (13) defining a reservoir chamber (24) and a pressure chamber (16) in said cylinder over and under said plunger (13), respectively, and having a passage (51) (Fig. 2) through which said pressure chamber (16) communicates with said reservoir chamber (24), a check valve (52) provided at said passage (51) to close said passage (51) when a pressure in said pressure chamber (16) exceeds a pressure in said reservoir chamber (24)."

TANAKA does not teach “a return spring mounted around said cylinder to bias said rod outwardly of said cylinder.”

(JP 5-10849) teaches a spring (12) around the shock absorber (Fig. 1)

It is obvious to one of ordinary skill in the art at the time the invention was made to combine the belt tensioner in TANAKA with the spring in (JP 5-10849).

The combination results in a belt tensioner with a more easily replaceable return spring.

TANAKA does not teach "wherein a minute oil leak gap is formed between sliding surfaces of said sleeve and said plunger such that hydraulic oil can flow from said pressure chamber into said reservoir chamber via said minute oil leak gap."

TANAKA2 teaches a minute oil gap (14) (Fig. 3, Fig. 4).

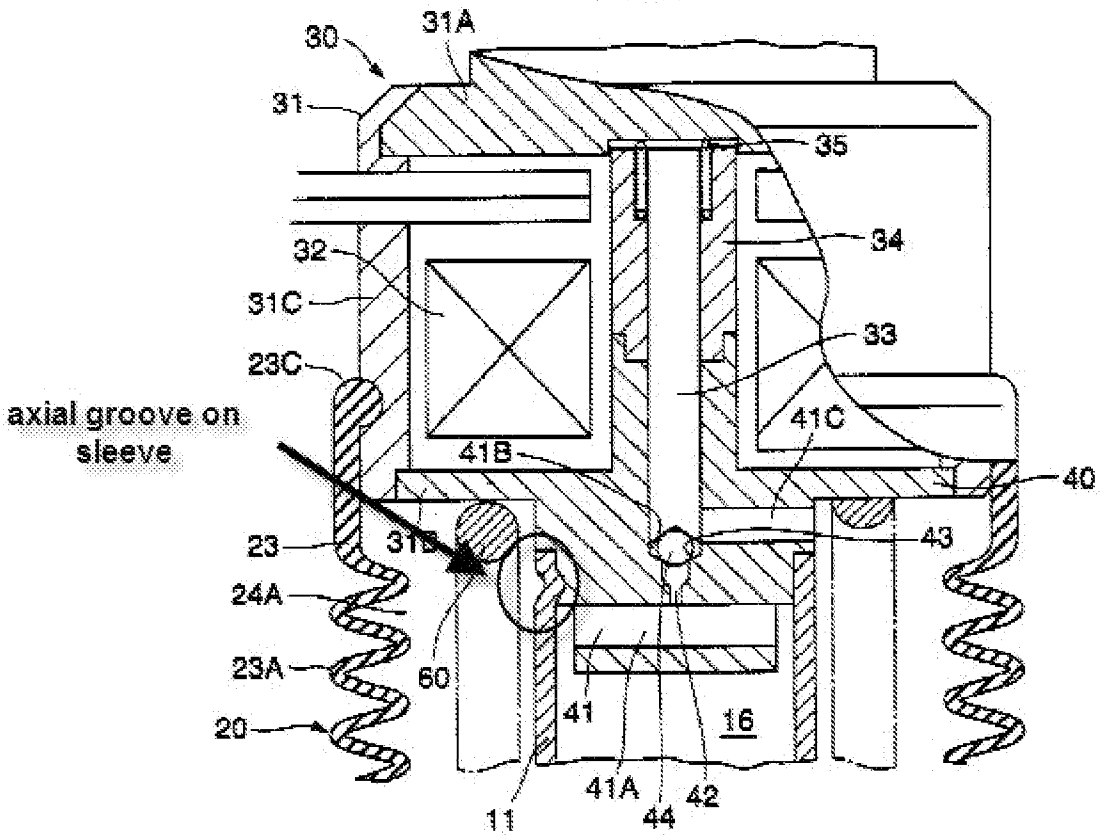
It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the shock absorber in TANAKA with the oil leak gap between the plunger and the sleeve as in TANAKA2 to reduce damping for a desired application while eliminating friction caused by the sliding contact between the plunger and the sleeve.

TANAKA teaches "a return chamber (41c) is defined under said sleeve (11) so as to communicate with said reservoir chamber (24), said bottom of said sleeve (11) being formed with a valve hole (42) through which said return chamber (41c) communicates with said pressure chamber (16) and wherein a relief valve (44) provided at said valve hole (42) to open said valve hole (42) if the pressure in said pressure chamber (16) exceeds a set pressure (Col. 5 lines 1-8)." The pressure in the pressure chamber must overcome the spring (35) to open the valve hole (42).

Regarding Claim 2, TANAKA as modified teaches "wherein said return chamber (TANAKA (24)) communicates with said reservoir chamber (TANAKA

(24)) through at least one axial groove formed in a surface between said sleeve and said cylinder." See figure below.

FIG.2



Regarding Claim 3, TANAKA as modified teaches "wherein the surface in which said at least one axial groove is formed is an outer peripheral surface of said sleeve." See figure above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY LIU whose telephone number is (571) 270-7018. The examiner can normally be reached on Mon-Thurs 7:30am - 5:00pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT SICONOLFI can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HENRY LIU/
Examiner, Art Unit 3657

/Bradley T King/
Primary Examiner, Art Unit 3657